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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/917,072	07/26/2001	Abdeltif Essalik	9911.1aV1	8052

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[REDACTED] EXAMINER

OLSEN, KAJ K

ART UNIT	PAPER NUMBER
1744	3

DATE MAILED: 12/20/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

A-9-3

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/917,072	ESSALIK ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Kaj Olsen	1744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-10 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_ is/are allowed.  
 6) Claim(s) 1-10 is/are rejected.  
 7) Claim(s) \_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 26 July 2001 is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 11) The proposed drawing correction filed on \_\_\_\_ is: a) approved b) disapproved by the Examiner.  
     If approved, corrected drawings are required in reply to this Office action.  
 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.  
 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
 a) The translation of the foreign language provisional application has been received.  
 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____.  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____. | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Oath/Declaration***

1. Applicant states that this application is both a divisional and a continuation in part of application 09/498,211. Applications cannot be both a divisional and a continuation in part at the same time. Divisional applications are reserved for applications that name the same or fewer inventors than the parent application and are drawn to the same original disclosure of the parent application in order to be entitled to the same priority date. In contrast this application names a greater number of inventors and clearly has subject matter in the specification that was not present in the parent application (evidenced by fig. 10-15 and the subject matter described on pages 10-17). Although the examiner recognizes that the independent claim is drawn to subject matter that was restricted in the prosecution of the previous application, the additional subject matter identified above (and the additional inventor) indicates that this application is technically a continuation in part and does not qualify as a divisional application.
2. Currently, the office identifies this application as being a divisional application and not a continuation in part. However, for the purposes of examination, the examiner will treat this application as if it were a continuation in part and will not identify the subject matter of the disclosure that would constitute new matter if this application were in fact a divisional application. Applicant should submit a new oath or declaration identifying this application as being a continuation in part.

*Drawings*

3. The drawings are objected to because there are two figure 9s. One of the figure 9s should be canceled. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

*Specification*

4. The reference to the parent application should be corrected to remove reference to the application being a divisional of the parent. This reference should also be corrected to indicate that the parent application now has a patent number associated with it.

5. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code (pp. 11 and 14). Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

*Double Patenting*

6. Applicant is advised that should claim 4 be found allowable, claim 5 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 1-10 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

9. Claim 1 is drawn to sensor comprising one or more alkali metal nitrates and one or more alkali earth metal nitrates. However, the only discussion of metal nitrate based sensors is found on p. 8, lines 4 and 5, which specify a sensor comprising BaNO<sub>3</sub>, AgCl, and NaCl. There is no discussion in the specification of using a combination of an alkali and an alkali earth nitrate based sensor.

10. In claim 1, limitation (a) (iii) specifies the use of one or more reference metal halogen where the metal is chosen from a list of possible metals. However, the only metal halogen taught by the specification in conjunction with the oxides of nitrogen sensor is AgCl (see above), which isn't part of the claimed invention. Although the applicant does identify the other metals from this limitation (e.g. p. 6, lines 6 and 7), these metals are in conjunction with the sensor constructed of carbonate material and are not clearly associated with the sensor constructed of nitrate material.

11. Claims 2 and 3 specify particular weight percentages for the components specified in claim 1. Although the specification does identify the use of 20 percent alkali metal salt and the

Art Unit: 1744

use of 0.005 percent metal halogen, again these are identified in conjunction with the sensor constructed of carbonate material and are not clearly associated with the sensor constructed of nitrate materials.

12. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

13. Claims 4 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

14. Claims 4 and 5 are indefinite because it is unclear if the reference temperature detector and the thin layer heater are actually being claimed. The claims are further confusing because the claims state the substrate comprises a number of elements including the electrodes. However, the electrodes were previously claimed and they cannot be construed as being part of the substrate because only one or none of the electrodes could be construed as being in connection with the substrate (see fig. 9). The electrodes clearly cannot be a further comprisal of the substrate if they are not in contact with the substrate.

### *Conclusion*

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kurosawa et al (USP 6,143,165), Kieselete et al (USP 5,344,546), and Guth et al (DD 235,335) all teach nitrogen oxide sensors based on a combination of alkali nitrates and alkali earth nitrates.

Art Unit: 1744

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kaj Olsen whose telephone number is (703) 305-0506. The examiner can normally be reached on Monday through Thursday from 8:00 AM-5:30 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Mr. Robert Warden, can be reached at (703) 308-2920.

When filing a fax in Group 1700, please indicate in the header "Official" for papers that are to be entered into the file, and "Unofficial" for draft documents and other communications with the PTO that are not for entry into the file of this application. This will expedite processing of your papers. The fax number for this Group is (703) 305-7719.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist, whose telephone number is (703) 308-0661.

Kaj K. Olsen, Ph.D.



Patent Examiner

AU 1744



ROBERT J. WARDEN, SR.  
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